

Observations on the nocturnal migration of the Kurrichane Buttonquail in northern South Africa

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The Kurrichane Buttonquail *Turnix sylvatica* occurs over most of sub-Saharan Africa, and is widespread in southern Africa except in the south and southwest (Colahan 1997, Maclean 1993). It avoids forests and deserts (Urban *et al.* 1986). It also occurs in southwest Europe, southern and south-eastern Asia, parts of Asia, Philippines, Sulus, Java and Bali (Urban *et al.* 1986).

The Kurrichane Buttonquail is considered to be an intra-African migrant (Urban *et al.* 1986) but little is known of its migration. Tarboton *et al.* (1987) and Irwin (1981) considered it to be nomadic in the Transvaal and Zimbabwe respectively. Wintle

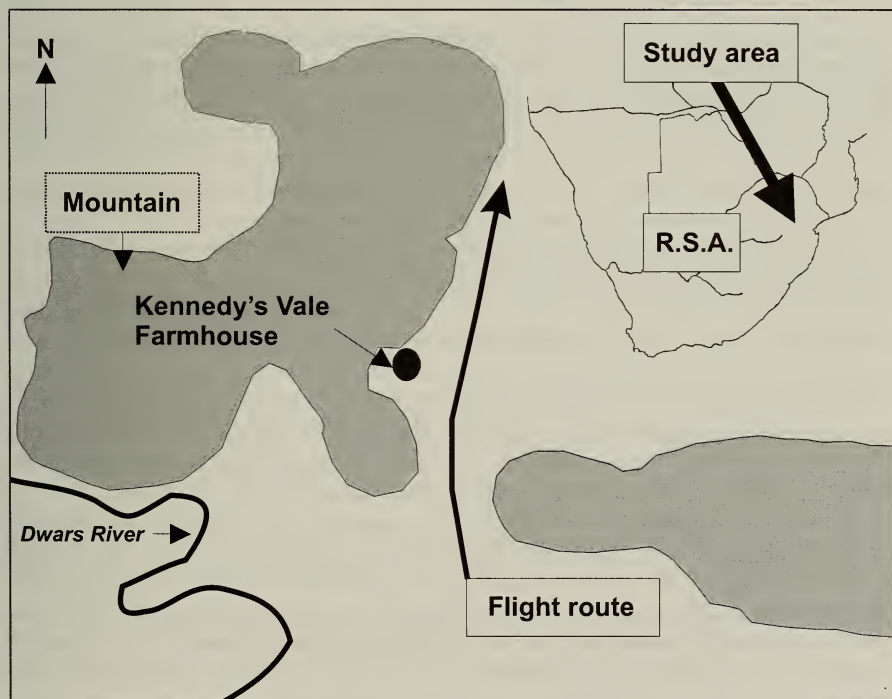


Figure 1. Map of the farm Kennedy's Vale (20°51'S, 30°08'E) showing mountains and supposed flight-route (arrow) of the Kurrichane Buttonquails.

(1975) thought it to be resident with local movements in the Matepatepa area of Zimbabwe.

Herremans (1994) recorded concentrations where good rains had fallen in Botswana. During a period of exceptionally high rainfall in 1988 in the Kgalagadi Transfrontier Park (formerly the Kalahari Gemsbok National Park), Kurrichane Buttonquails moved into the area in large numbers and the booming calls of displaying females could be heard all night (pers. obs.). This influx was quite abrupt, suggesting large scale and synchronized movement into the Park from elsewhere. This sudden influx of buttonquails was also evident by the large numbers of partially eaten carcasses found at nests of Barn Owls *Tyto alba* in the Park at that time (Herholdt 1993).

Del Hoyo *et al.* (1996) described birds being attracted to and colliding with artificial lights, windows and lighthouses at night, particularly in fog after heavy rain. They thought that buttonquails are capable of long distance movements by night. In Nigeria, at Ibadan, a Kurrichane Buttonquail flew into a lighted room at night, suggesting migration (Elgood *et al.* 1973). In Tsavo, in southeast Kenya, a similar observation was made when a single Kurrichane Buttonquail flew to a lighted wall of a building at night (Moreau 1972).

During the nights of 4 and 5 December 1999 observations on the nocturnal migration of Kurrichane Buttonquails were made at the farmhouse at Kennedy's Vale (20° 51'S, 30° 08'E), Mpumalanga Province, South Africa (Fig. 1). Both nights were overcast with occasional light drizzle and lightning on the skyline. The night of 4 December was calm, but a light southeasterly breeze blew on the night of 5 December. The whole area had received good rain (119 mm were measured in the immediate vicinity for November) and were covered in green stands of grass.

The first indication of Kurrichane Buttonquails was at 2300 h on 4 December, when a male was captured as it flew into the house. The outside neon light of the farmhouse and some interior lights in one room were on at the time. Nine dead buttonquails, which had been recently captured by domestic dogs, were found under the outside light. A torchlight search around the farmhouse revealed many buttonquails sitting all over the farmyard. By 0115 h on the morning of 5 December, 21 Kurrichane Buttonquails had been captured, and no more birds could be heard passing overhead. Dead birds were sexed and measured and captured birds were bagged and sexed, measured, ringed and released just after sunrise the same morning.

In the hand buttonquails occasionally uttered a soft "keoo" call, and at times the whole sky appeared to be filled with these soft calls, suggesting that the birds migrated in waves. Although the night was too dark to see the buttonquails in the sky, it was estimated that the birds must have been flying at 10–20 m above ground level. Some buttonquails landed in the yard, while others came crashing through trees to land on the ground. Some remained in shrubby trees and only took off when the trees were shaken.

The movement of calls indicated that the buttonquails flew in a northerly direction (Fig. 1), and most of those that landed took off again almost immediately, heading in

the same direction. The mountains in the area may have funneled the buttonquails, resulting in the large numbers that flew over the Kennedy's Vale farmhouse (Fig. 1). Five buttonquails landed in the swimming pool: three were able to immediately take off again, the other two were rescued and later released. Some landed far from the outside light where it was totally dark and some even landed on another farmhouse without outside lighting. It was evident, from the large amount of calling, that only a small percentage of the buttonquails that passed overhead landed around the farmhouse.

The next night (5 December), buttonquails again passed northwards over the farmhouse from 1200 h – 0215 h, but in smaller numbers than on the previous night. The flights were few and far between and much less calling was heard. Only six birds were captured.

Of the 36 buttonquails sexed and measured, only two were females. Males were lighter in weight than females (34.5 ± 2.9 (SD) g vs. 45.5 and 48.0 g) and had shorter wings (78.1 ± 2.1 (SD) mm vs 84 and 91 mm). Tail, tarsus and exposed culmen did not differ between the sexes. The females, apart from being larger, also had a much larger and richer rufous upper breast patch (Wintle 1975).

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